



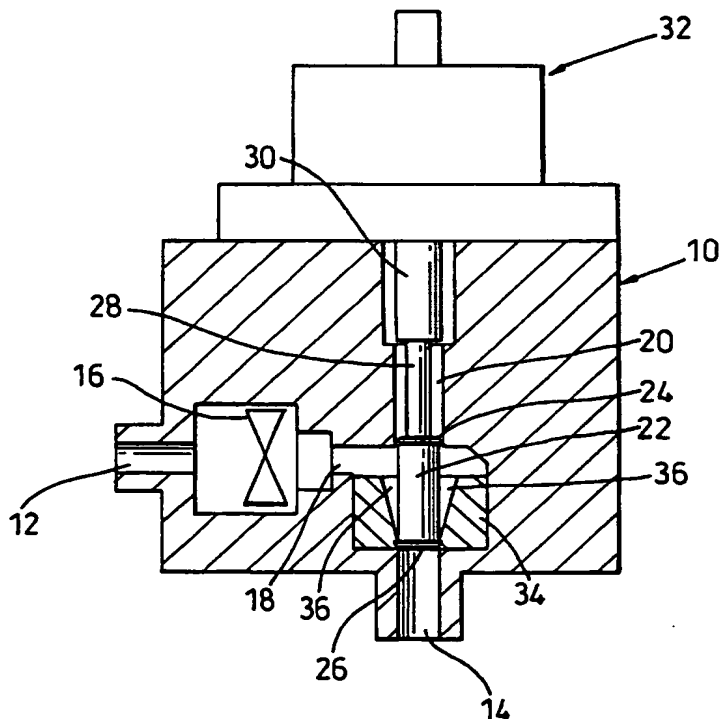
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : B67D 1/00		A1	(11) International Publication Number: WO 00/68136
			(43) International Publication Date: 16 November 2000 (16.11.00)
(21) International Application Number: PCT/GB00/01732 (22) International Filing Date: 5 May 2000 (05.05.00) (30) Priority Data: 9910607.2 8 May 1999 (08.05.99) GB (71) Applicant (for all designated States except US): IMI CORNELIUS (UK) LIMITED [GB/GB]; Tything Road, Alcester, Warwickshire B49 6EU (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): BARKER, Paul [GB/GB]; 52 Westbourne, Honeybourne, Evesham, Worcester WR11 5PT (GB). HEYES, Keith, James [GB/GB]; 96 Tredington Close, Redditch, Worcestershire B98 7UR (GB). JOHNSON, Martin, Stanley [GB/GB]; 7 Rupert Kettle Drive, Bishops Itchington, Leamington Spa, Warwickshire CV33 0PU (GB). MAULDER, Steven [GB/GB]; 21 Jubilee Avenue, Headless Cross, Redditch, Worcestershire B97 5HB (GB). SIMMONS, Phillip, Andrew [GB/GB]; 26 Moorfield Road, Alcester, Warwickshire B49 5DA (GB). (74) Agents: SYKES, John, C. et al.; IMI plc, Patents & Licensing Department, P.O. Box 216, Birmingham B6 7BA (GB).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.	

(54) Title: DOSING VALVE WITH FLOW RATE SENSOR FOR A BEVERAGE DISPENSER

(57) Abstract

A beverage dispenser to provide a plurality of different flavours with accurate mixing control comprises a housing (40, 42, 44) containing a diluent valve (46A, 46B) and at least two concentrate valves (48A, B, C, D), each valve having its own inlet (12) and outlet (14), characterised in that all the outlets (14) lead to a single dispense nozzle (50A, B, C), a flow rate sensor (16) is provided for each valve, the flow rate sensors (16) being connected to a controller (54), and a setting mechanism (52A, B, C, D, E, F) is provided to open and close each valve, the controller (54) operating the setting mechanisms whereby one concentrate valve and the diluent valve may be opened to dispense a particular beverage and, in response to the sensed flow rates through those opened valves, controlling the degree of opening of those valves to achieve a predetermined diluent to concentrate ratio for the beverage mixture in the dispense nozzle (50A, B, C).



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
RJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		